

Claims

1. A surgical instrument, comprising:
an elongate implement portion responsive to a firing motion to perform a surgical procedure; and
a handle connected to the elongate implement portion, comprising:
5 a firing mechanism operably configured to produce full travel of the firing motion between an unfired position and a fully fired position,
a firing trigger engageable to the firing mechanism during a plurality of firing strokes to move the firing mechanism during a plurality of firing strokes to
from the unfired position toward the fully fired position, and
10 an indicator member rotationally related to the firing mechanism to indicate the position of the firing mechanism during firing, the indicator moveable from the unfired to the fully fired position.
2. The surgical instrument of claim 1, wherein the indicator member includes an actuator, the indicator member coupled to the firing mechanism for transferring a return motion from the actuator to urge the firing mechanism toward the unfired position.
3. The surgical instrument of claim 2, wherein the handle further comprises a housing and the indicator member includes a knob exposed by the housing.
4. The surgical instrument of claim 3, wherein the handle when grasped laterally exposes the knob, the handle further comprising a lever attached to the knob and extending longitudinally for actuation by either hand.
5. The surgical instrument of claim 3, wherein the indicator member is disengageable from the firing mechanism during firing.
6. The surgical instrument of claim 5, wherein the indicator member comprises a gear having at least one dwell area and a gear section, the gear section engageable to the firing mechanism.

7. The surgical instrument of claim 5, wherein the firing mechanism includes a rack portion, the handle further comprising an idler gear enmeshed with the rack portion and registered to engage the gear section of the indicator gear.
8. The surgical instrument of claim 1, wherein said end effector comprises a stapling device responsive to the longitudinal firing motion to perform the surgical operation of stapling.
9. The surgical instrument of claim 8, wherein said end effector comprises:
an elongate channel connected to said shaft;
an anvil pivotally coupled to said elongate channel for clamping tissue; and
a staple cartridge received in said elongate channel;
- 5 wherein said firing member distally terminates in a firing bar operably configured to actuate said staple cartridge to form staples in the clamped tissue.

10. A surgical instrument, comprising:
an elongate implement portion responsive to a firing motion to perform a surgical procedure;
a firing mechanism operably configured to produce full travel of the firing motion
5 between an unfired position and a fully fired position,
a firing trigger engageable to the firing mechanism during at least one firing stroke to move the firing mechanism from the unfired position toward the fully fired position, and
an indicator member visible to an operator and related to the firing mechanism to
10 indicate the position of the firing mechanism during firing.
11. The surgical instrument of claim 10, wherein the firing mechanism further comprises a firing member communicating with the elongate implement portion to transfer the firing motion, the indicator member further comprising a means for manually applying a retraction force to the firing member.
12. The surgical instrument of claim 10, wherein a closure means that allows an opening and closing of the implement portion separate from the firing motion.

13. A surgical instrument, comprising:
an elongate implement portion responsive to a firing motion to perform a surgical procedure;
a handle operated by a user;
- 5 a firing member communicating the firing motion from the handle to the elongate implement portion;
a firing mechanism engageable to the firing member and operably configured to produce full travel of the firing motion between an unfired position and a fully fired position,
- 10 a firing trigger engageable to the firing mechanism during at least one firing stroke to move the firing mechanism from the unfired position toward the fully fired position, and
a manual retraction member configured for actuation by an operator and operably configured to impart a return motion to the firing member 3. The surgical
- 15 instrument of claim 2, wherein the handle further comprises a housing and the indicator member includes a knob exposed by the housing.
14. The surgical instrument of claim 13, wherein the handle when grasped laterally exposes the knob, the handle further comprising a lever attached to the knob and extending longitudinally for actuation by either hand.
15. The surgical instrument of claim 13, wherein the indicator member is disengageable from the firing mechanism during firing.
16. The surgical instrument of claim 15, wherein the indicator member comprises a gear having a at least one dwell area and a gear section, the gear section engageable to the firing mechanism.
17. The surgical instrument of claim 15, wherein the firing mechanism includes a rack portion, the handle further comprising an idler gear enmeshed with the rack portion and registered to engage the gear section of the indicator gear.

18. The surgical instrument of claim 13, wherein said end effector comprises a stapling device responsive to the longitudinal firing motion to perform the surgical operation of stapling.
19. The surgical instrument of claim 18, wherein said end effector comprises:
an elongate channel connected to said shaft;
an anvil pivotally coupled to said elongate channel for clamping tissue; and
a staple cartridge received in said elongate channel;
- 5 wherein said firing member distally terminates in a firing bar operably configured to
actuate said staple cartridge to form staples in the clamped tissue.
20. The surgical instrument of claim 19, wherein the implement portion is dimensionally sized for endo-scopic surgical procedures.